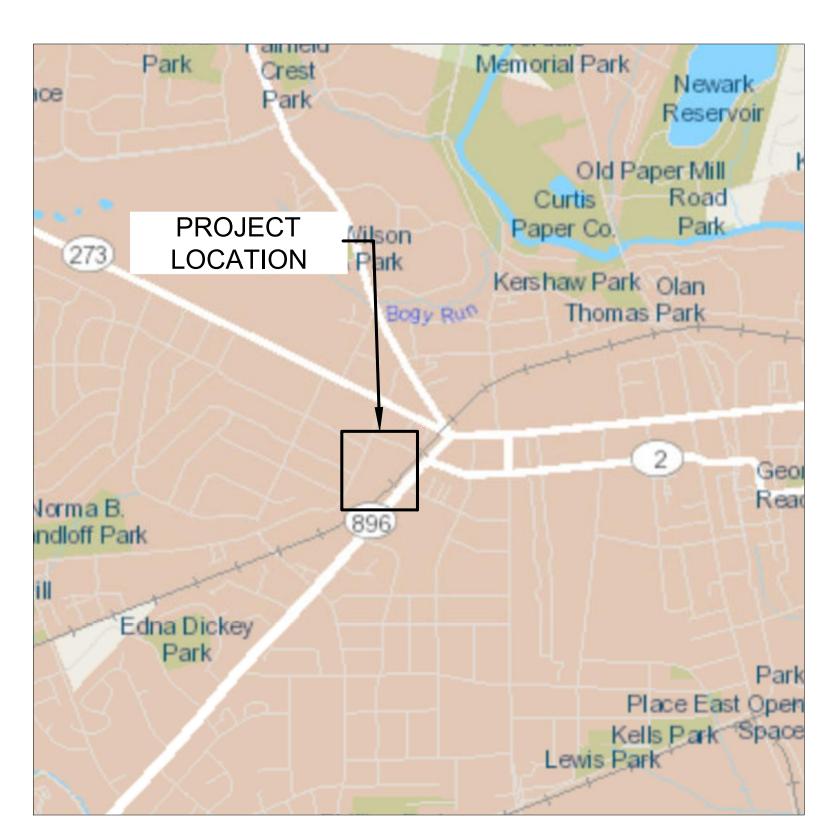
CITY OF NEWARK PUBLIC WORKS & WATER RESOURCES DEPARTMENT NEW CASTLE COUNTY, DELAWARE

RODNEY COMPLEX - MASS EXCAVATION

CONTRACT NO. 19-14 103 HILLSIDE ROAD, NEWARK DE 19711

	DRAWING INDEX						
DRAWING NO.	SHEET NO.	SHEET TITLE					
1	1 OF 8	TITLE SHEET					
2	2 OF 8	GENERAL NOTES					
3	3 OF 8	EXISTING SITE CONTROLS					
4	4 OF 8	MASS EXCAVATION PLAN					
5	5 OF 8	EROSION AND SEDIMENTATION CONTROL PLAN					
6	6 OF 8	MASS EXCAVATION DETAILS					
7	7 OF 8	EROSION AND SEDIMENTATION CONTROL DETAILS					
8	8 OF 8	EROSION AND SEDIMENTATION CONTROL DETAILS					



SCALE: NOT TO SCALE

BEFORE YOU DIG CALL

1-800-282-8555 (in Del.)

1-800-441-8355 (Md., Va.)

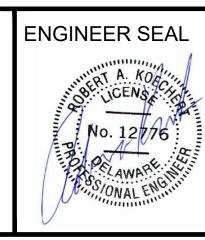
PROTECT YOURSELF, GIVE TWO

WORKING DAYS NOTICE

PREPARED BY:

JOHNSON, MIRMIRAN & THOMPSON
Engineering A Brighter Future®

121 Continental Drive, Suite 300 Newark, DE 19713



REV.	DESCRIPTION	DRAWN	DATE
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PREPARED FOR:

NEWARK
DELAWARE
Committed to Service Excellence

220 SOUTH MAIN STREET
302-366-7000

APPROVALS	DATE	CITY OF NEWARK				
DRAWN BY: AJB	12-27-19	PUBLIC WORKS & WATER RESOURCES DEPARTMENT RODNEY COMPLEX - MASS EXCAVATION				
CHECKED BY: RAK	12-27-19					
ENGINEER: CRB	12-27-19	SHEET TITLE: TITLE SHEET				
OPERATIONS:		SCALE: NTS DWG NO.				
REVISION:		SHEET NO: 1 OF 8				

- A. TAX MAP NO. 1801900286
- B. SITE ADDRESS: 103 HILLSIDE ROAD

NEWARK, DE 19713

C. LAT: 39°40'53.74"

LONG: -75°45'34.36"

BENCHMARK (JMT4 - MAG. NAIL):

NORTHING = 612370.79

EASTING = 559668.87

ELEVATION = 132.06

- D. TOTAL SITE AREA (PER DEED PLOT)= 7.55 ACRES
- E. SINGLE LOT
- F. APPROX. TOTAL LIMIT OF DISTURBANCE = 7.55 ACRES
- 2. EXISTING BOUNDARY AND TOPOGRAPHICAL DATA IS BASED ON A SITE SURVEY PERFORMED BY JMT IN APRIL OF 2017. SURVEY CONTROLS ARE BASED ON THE DELAWARE COORDINATE SYSTEM HORIZONTAL NAD 83/91 AND VERTICAL NAVD 88. SEE SURVEY DATA IN SURVEY GENERAL NOTES, THIS SHEET.
- 3. ALL SURVEY AND STAKE-OUT WORK SHALL BE PERFORMED BY A LAND SURVEYOR LICENSED IN THE STATE OF DELAWARE.
- 4. ALL BUILDINGS AND FOUNDATIONS SHOWN ON THE EXISTING CONDITIONS PLAN WILL BE REMOVED BY OTHERS PRIOR TO THE NOTICE TO PROCEED FOR THIS CONTRACT. QUANTITIES FOR MASS EXCAVATION WERE ESTIMATED BASED ON ASSUMED FINAL GRADE AT THE END OF THE DEMOLITION WORK. FINAL QUANTITIES WILL BE UPDATED ONCE DEMOLITION WORK BY OTHERS IS COMPLETE.
- 5. ALL ELEVATIONS ARE IN FEET.
- 6. ALL EXISTING SITE CONDITIONS SHOWN ON THESE PLANS ARE BASED ON LIMITED FIELD SURVEY, VISUAL SITE RECONNAISSANCE, AND/OR OTHER AVAILABLE DATA, THUS ARE TO BE CONSIDERED APPROXIMATE. THE CONTRACTOR SHALL INSPECT THE SITE PRIOR TO BIDDING AND CONSTRUCTION. PRIOR TO AND DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THESE PLANS TO RESOLVE THESE ISSUES. SHOULD THE CONTRACTOR PROCEED WITH THE WORK MAKING FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE OWNER, THE CONTRACTOR WILL ASSUME ALL RESPONSIBILITIES FOR THOSE CHANGES.
- 7. CONTRACTOR SHALL NOTIFY MISS UTILITY OF DELAWARE 72 HOURS BEFORE START OF CONSTRUCTION AND BEFORE DIGGING. CALL 1(800) 282-8555.
- 8. CONTRACTOR SHALL NOTIFY TIM FILASKY PE, CITY OF NEWARK PUBLIC WORKS AND WATER RESOURCES DIRECTOR AT 302-366-7000 AT LEAST 72 HOURS BEFORE START OF CONSTRUCTION.
- CONTRACTOR SHALL NOTIFY CAITLIN OLSEN UNIVERSITY OF DELAWARE MANAGER OF COMMUNITY RELATIONS AND SPECIAL EVENTS AT 302-831-6978 AT LEAST 72 HOURS BEFORE START OF CONSTRUCTION.
- 10. UNLESS OTHERWISE NOTED AND AS APPLICABLE TO THE WORK, ALL CONSTRUCTION, MATERIALS, AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE:
 - A. CITY OF NEWARK DELAWARE MUNICIPAL CODE
 - B. CITY OF NEWARK DEPARTMENT OF PUBLIC WORKS AND WATER RESOURCES WATER AND WASTEWATER STANDARDS AND SPECIFICATIONS.
 - C. CITY OF NEWARK STANDARD SPECIFICATIONS FOR ROAD AND UTILITY CONSTRUCTION, DETAILS AND
 - D. DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND DETAILS
 - E. DELAWARE SEDIMENT AND STORMWATER REGULATIONS (SEE EROSION AND SEDIMENT CONTROL NOTE 1).
- 10. WHERE REFERENCES ARE MADE TO STANDARDS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE IN ITS POSSESSION THE LATEST UP-TO-DATE STANDARDS AS OF THE DATE OF ADVERTISEMENT OF THIS PROJECT
- 11. ALL AREAS DISTURBED BY THE CONTRACTOR, WHETHER DISTURBED DIRECTLY OR INDIRECTLY BY THE CONSTRUCTION OR OTHER ACTIVITIES RELATED TO THE PERFORMANCE OF THIS PROJECT. SHALL BE RETURNED TO EQUAL OR BETTER THAN THE ORIGINAL CONDITION PRIOR TO FINAL ACCEPTANCE OF THE WORK. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING UTILITIES, CURBS, SIDEWALK, PAVING, SHRUBS, FENCING, ETC. ANY AND ALL DAMAGE DONE TO SAME SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT CONTRACTOR'S EXPENSE.
- 12. UNLESS NOTED OTHERWISE, ALL MATERIALS SALVAGED DURING DEMOLITION AND CONSTRUCTION SHALL BECOME THE CONTRACTOR'S PROPERTY AND SHALL BE DISPOSED OF OFF-SITE IN A LAWFUL LOCATION AND MANNER. ALL FEES ASSOCIATED WITH OFF-SITE DISPOSAL SHALL BE PAID BY THE CONTRACTOR.
- 13. TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED, MONITORED, AND MAINTAINED BY THE CONTRACTOR IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLANS INCLUDED HEREIN.
- 14. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH HAVE OCCURRED BY HIS/HER FAILURE NOT TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING HIS/HER WORK. ITEMS SHALL BE REPLACED WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED OR DAMAGED DURING CONSTRUCTION OR AS DIRECTED BY THE ENGINEER.
- 15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE LOCATION AND ACTIVITIES OF HIS FORCES WITH THE OWNER, AND ABUTTING PROPERTY OWNERS TO MINIMIZE INTERFERENCE WITH EXISTING UTILITIES, PEDESTRIAN TRAFFIC, AND PROPERTY ACCESS. PEDESTRIAN AND VEHICLE ACCESS SHALL BE MAINTAINED AT ALL TIMES.
- 16. THE PLANS AND SPECIFICATIONS DO NOT INCLUDE PROVISIONS FOR CONSTRUCTION SAFETY. A HEALTH AND SAFETY PLAN MUST BE DEVELOPED BY CONTRACTOR PRIOR TO STARTING WORK.
- 17. THE CONTRACTOR SHALL ACQUIRE ALL PERMITS PRIOR TO STARTING CONSTRUCTION AT NO COST TO THE CITY OF NEWARK.
- 18. METHODS, PROCEDURES AND THE SEQUENCES OF CONSTRUCTION (OTHER THAN THAT NOTED ON THE DRAWINGS) ARE THE RESPONSIBILITY OF THE CONTRACTORS(S).
- 19. THE CONTRACTOR SHALL KEEP ROADWAYS CLEAN AT ALL TIMES. ALL SOIL SPILLED, DROPPED, WASHED OR TRACKER ONTO ROADWAYS OR OTHER IMPERVIOUS SURFACES MUST BE REMOVED IMMEDIATELY BY CONTRACTOR.
- 20. THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN A JOBSITE FREE OF LITTER AND TRASH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THE SITE AT THE END OF THE DAY TO CLEAN UP ANY TRASH OR LITTER GENERATED BY THE PERSONNEL AND SUBCONTRACTORS WORKING FOR THE CONTRACTOR AND DISPOSE OF DEBRIS PROPERLY.

EROSION AND SEDIMENT CONTROL GENERAL NOTES

- 1. THE CITY OF NEWARK PUBLIC WORKS AND WATER RESOURCES DEPARTMENT SHALL BE NOTIFIED IN WRITING 5 DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
- 2. REVIEW AND/OR APPROVAL OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS. NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.
- 3. IF THE APPROVED PLAN NEEDS TO BE MODIFIED. ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY DNREC OR THE CITY OF NEWARK.
- 4. FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED FOR ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE WITHIN 14 CALENDAR DAYS UNLESS MORE RESTRICTIVE FEDERAL REQUIREMENTS APPLY.
- 5. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
- 6. AT ANY TIME A DEWATERING OPERATION IS USED, IT SHALL BE PREVIOUSLY APPROVED BY THE AGENCY CONSTRUCTION SITE REVIEWER FOR A NON-EROSIVE POINT OF DISCHARGE. AND A DEWATERING PERMIT SHOULD BE APPROVED BY THE DNREC WELL PERMITTING BRANCH.
- 7. APPROVED PLANS REMAIN VALID FOR 5 YEARS FROM THE DATE OF APPROVAL.
- 8. POST CONSTRUCTION VERIFICATION DOCUMENTS SHALL BE SUBMITTED TO THE CITY OF NEWARK PUBLIC WORKS AND WATER RESOURCES DEPARTMENT WITHIN 60-DAYS OF STORMWATER MANAGEMENT FACILITY COMPLETION.
- 9. APPROVAL OF A SEDIMENT AND STORMWATER MANAGEMENT PLAN DOES NOT GRANT OR IMPLY A RIGHT TO DISCHARGE STORMWATER RUNOFF. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ACQUIRING ANY AND ALL AGREEMENTS, EASEMENTS, ETC., NECESSARY TO COMPLY WITH STATE DRAINAGE AND OTHER APPLICABLE LAWS.
- 10. THE NOTICE OF INTENT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER A NPDES GENERAL PERMIT FOR THIS PROJECT IS # (TO BE FILLED IN ONCE RECIEVED). THE PERMITTEE OF RECORD SHALL NOT BE RELIEVED OF THEIR RESPONSIBILITIES UNTIL A NOTICE OF TERMINATION HAS BEEN PROCESSED BY THE DEPARTMENT.
- 11. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHALL BE CHECKED DAILY AND ADJUSTED OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR ALTER MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
- 12. BEFORE ANY EARTHWORK OR EXCAVATION TAKES PLACE, THE CONTRACTOR SHOULD CALL MISS UTILITY AT 811 OR 1-800-282-8555 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, TO HAVE ALL EXISTING UTILITIES MARKED
- 13. BEST AVAILABLE TECHNOLOGY (BAT) SHALL BE EMPLOYED TO MANAGE TURBID DISCHARGES IN ACCORDANCE WITH REQUIREMENTS OF 7 DEL.C.CH.60 AND THE CURRENT DELAWARE CONSTRUCTION GENERAL PERMIT (CGP).
- 14. DOCUMENTATION OF SOIL TESTING AND MATERIALS USED FOR TEMPORARY OR PERMANENT STABILIZATION INCLUDING BUT NOT LIMITED TO SOIL TEST RESULTS. SEED TAGS. SOIL AMENDMENT TAGS. ETC. SHALL BE PROVIDED TO THE CITY OF NEWARK PUBLIC WORKS AND WATER RESOURCES DEPARTMENT TO VERIFY THAT THE PERMANENT OR TEMPORARY STABILIZATION HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED PLAN.
- 15. THE CITY OF NEWARK MAY REQUIRE ADDITIONAL SOIL TESTING AND REAPPLICATION OF PERMANENT OR TEMPORARY STABILIZATION IN ACCORDANCE WITH THE SPECIFICATIONS IN THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, OR ALTERNATIVE MEASURES THAT PROVIDE FUNCTIONAL EQUIVALENCY.

SEQUENCE OF CONSTRUCTION

BEFORE ANY CONSTRUCTION BEGINS, THE CONTRACTOR SHALL CONTACT THE DESIGNATED CERTIFIED CONSTRUCTION REVIEWER (CCR) A MINIMUM OF 2 WORKING DAYS IN ADVANCE SO THAT THE REQUIRED FACILITY CONSTRUCTION CHECKLIST CAN BE COMPLETED.

1. INITIAL CONSTRUCTION:

- A. INSTALL STABILIZED CONSTRUCTION ENTRANCE(S) AS NEEDED
- B. CLEAR AND GRUB FOR INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS.
- C. INSTALL PERIMETER CONTROLS AS SHOWN ON THE PLANS.
- D. EXISTING TREES, BUSHES, AND SHRUBS TO REMAIN AFTER CONSTRUCTION AND AS SHOWN ON THE PLANS SHALL BE PROTECTED BY THE CONTRACTOR FROM ALL DAMAGE.
- E. CLEAR AND GRUB REMAINING AREA FOR WET POND CONSTRUCTION.
- F. INSTALL PIPE OUTLET SEDIMENT TRAP AND SKIMMER DEWATERING DEVICE AS SHOWN IN THE PLANS AND PER TEMPORARY OUTLET STRUCTURE AND PIPE SCHEDULE.
- G. COMPLETE EXCAVATION TO THE LINES AND GRADES SHOWN.
- H. ALL DISTURBED AREAS MEETING FINAL ELEVATIONS AND GRADES SHALL BE SEEDED AND MULCHED.

2. MAINTENANCE OF SEDIMENT BASIN:

- A. THE CONTRACTOR SHALL INSPECT THE INTEGRITY AND FUNCTIONALITY OF EROSION AND SEDIMENT CONTROL MEASURES FOLLOWING RAIN EVENTS. REPAIRS SHALL BE MADE AS NECESSARY. PAYMENT FOR REPAIRING OR REPLACEMENT OF E&S MEASURES SHALL BE INCIDENTAL TO THE WORK ITEMS BEING PERFORMED.
- B. ANY EXCESS SEDIMENT AROUND THE OUTFALL AREA WILL BE REMOVED WITHIN TWO WORKING DAYS AND DISPOSED AT A LOCATION APPROVED BY THE ENGINEER.

AIR MONITORING REQUIREMENTS DURING MASS EXCAVATION

- 1. AIR MONITORING DURING MASS EXCAVATION WILL BE PAID FOR BY THE CITY OF NEWARK.
- 2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS INCLUDING BUT NOT LIMITED TO:
- A. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA):

i. 29 CFR 1910 GENERAL INDUSTRY STANDARDS

ii. 29 CFR 1910.134 RESPIRATORY PROTECTION

iii. 29 CFR 1926 CONSTRUCTION INDUSTRY STANDARDS

- B. ENVIRONMENTAL PROTECTION AGENCY (EPA):
 - i. 40 CFR PART 261 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGULATIONS
- ii. 40 CFR PART 61 NATIONAL EMISSIONS STANDARD FOR HAZARDOUS AIR POLLUTANTS;
- 3. DURING ACTIVE EXCAVATION DUST METER PUMPS WILL BE PLACED THROUGHOUT THE PROJECT SITE. THE LOCATION OF THE DUST METERS IS DETERMINED BY THE ONSITE FIELD INSPECTOR AND WILL VARY DEPENDING UPON WEATHER CONDITIONS, AND THE WORK THAT WILL BE PERFORMED DURING THE DAY. THE DUST METERS WILL BE FITTED WITH A PM10 (PARTICULATE MATTER 10µM) FILTER, SO THAT ONLY PM10 AND SMALLER PARTICLES WILL BE MEASURED.
- 4. THE FIELD INSPECTOR WILL ROUTINELY MONITOR THE DUST METERS AND NOTE WHEN PM10 CONCENTRATIONS APPROACH THE ACTION LEVEL OR EXCEED THE STOP WORK LEVEL.
 - A. PM10 CONCENTRATION ACTION LEVEL IS 0.100 MG/M^3 . IF THE DUST METER SHOWS THAT THE ACTION LEVEL IS EXCEEDED, CONTROL MEASURES, SUCH AS WETTING THE AREAS BEING DISTURBED, SHALL BE IMPLEMENTED BY THE CONTRACTOR AT THEIR EXPENSE AND INCIDENTAL TO THE PROJECT COST.
 - B. PM10 CONCENTRATION STOP WORK LEVEL IS 0.200 MG/M³. IF THE DUST METER SHOWS THAT THE STOP WORK LEVEL IS EXCEEDED, WORK WILL IMMEDIATELY CEASE AND CORRECTIVE ACTIONS MUST BE IMPLEMENTED. CONTROL MEASURES WILL BE IMPLEMENTED UNTIL THE CONCENTRATION OF PM10 IS BELOW 0.200 MG/M³. DO NOT RECOMMENCE WORK UNTIL AUTHORIZED IN WRITING BY ENGINEER. ALL CONTROL MEASURES SHALL BE COMPLETED AT THE EXPENSE OF THE CONTRACTOR.

1-800-282-8555 (in Del.) -800-441-8355 (Md., Va.

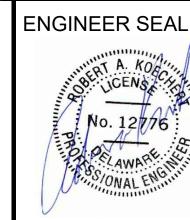
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MISS UTILITY DELMARVA

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PREPARED BY:

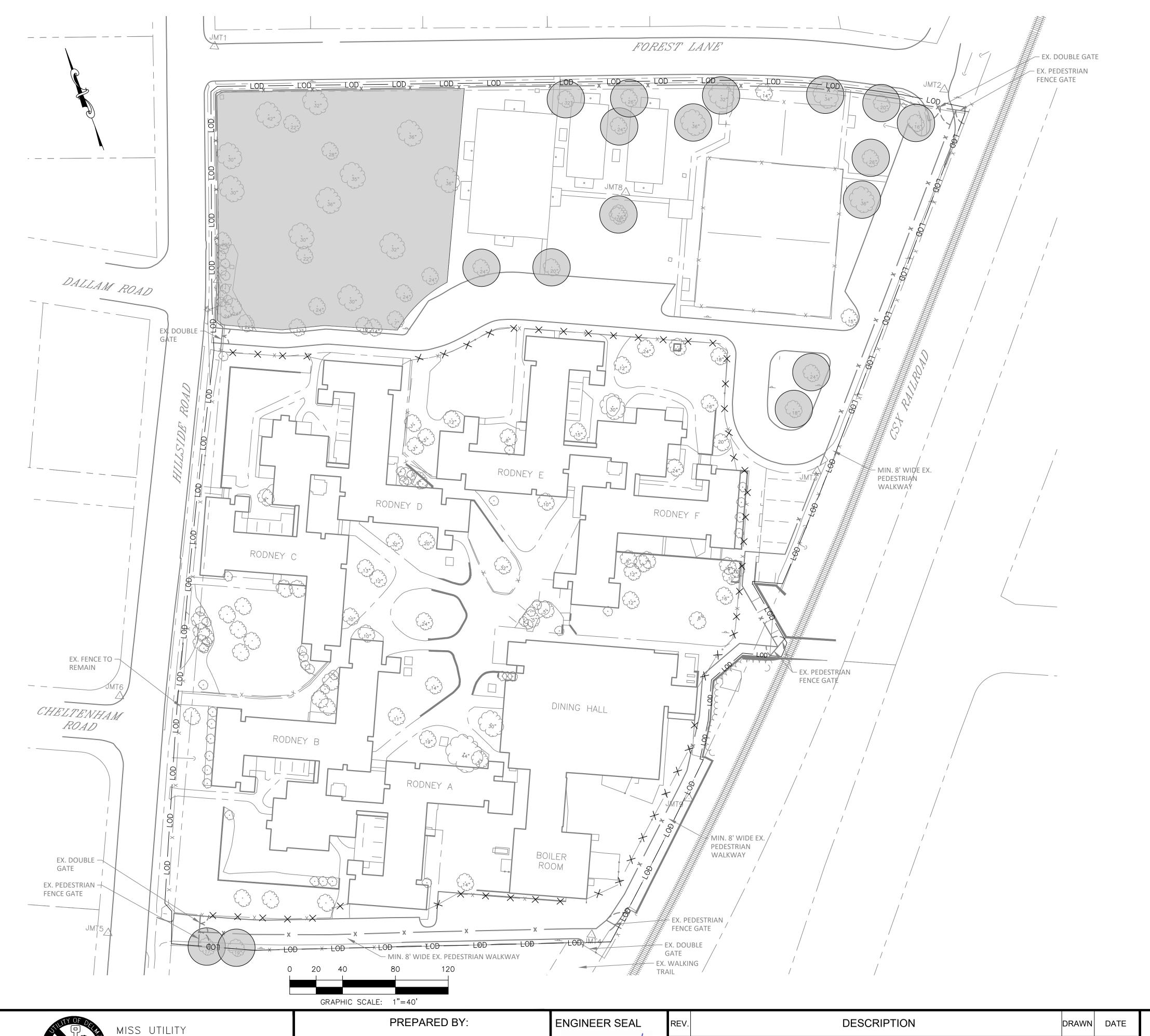
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APPROVALS	DATE	CITY OF NEWARK				
DRAWN BY: AJB	12-27-19	PUBLIC WORKS & WATER RESOURCES DEPARTMENT RODNEY COMPLEX - MASS EXCAVATION				
CHECKED BY: RAK	12-27-19	CONTRACT NO. 19-14				
ENGINEER: CRB	12-27-19	SHEET TITLE: GENERAL NOTES				
OPERATIONS:		SCALE: NTS DWG NO.				
REVISION:		SHEET NO: 2 OF 8				



LEGEND

----- EX. PAVEMENT

---- EX. CURB

EX. BUILDING

EX. WALL

— -130— EX. CONTOUR LINE

—— D EX. STORM SEWER PIPE

—— s —— EX. SEWER

—— w —— EX. WATER MAIN

W EX. WATER VALVE

---- X ---- EX. CHAIN LINK FENCE

---- T ---- EX. TELECOMMUNICATIONS

___ E ZX. UNDERGROUND ELECTRIC

S EX. UTILITY POLE

EX. ELECTRIC MANHOLE

EX. TREE

—— G —— EX. GAS MAIN

EX. GAS VALVE

EX. TRAVERSE POINT

EX. STORM CATCH BASIN

EX. STORM CATCH DASIN

 $EX. \quad HAND \quad BOX$

EX. LIGHT

EX. FIRE HYDRANT

EX. SEWER MANHOLE

— LOD — LIMIT OF DISTURBANCE

 \longrightarrow × \longrightarrow EX. FENCE TO BE REMOVED

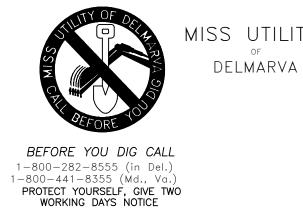
TREE PROTECTION AREA

SHEET NOTES

1. CONTRACTOR MAY ADJUST ENTRANCE/EXIT LOCATIONS TO SUIT THEIR MEANS AND METHODS TO COMPLETE THE WORK. ANY MODIFICATIONS TO THE EXISTING FENCE AND GATES SHALL BE COMPLETED AT NO COST TO THE OWNER.

- 2. IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN THE EXISTING FENCING THROUGHOUT THE DURATION OF THE PROJECT. ALL COSTS ASSOCIATED WITH FENCE MAINTENANCE IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 3. CONTRACTOR IS RESPONSIBLE TO MAINTAIN AN 8-FOOT WIDE PEDESTRIAN WALKWAY DURING PROJECT. CONTRACTOR MAY AT THEIR DISCRETION CLOSE PEDESTRIAN FENCE GATES DURING MASS EXCAVATION ACTIVITIES THAT WARRANT CLOSURE OF THE PEDESTRIAN WALKWAY. PEDESTRIAN WALKWAY MUST BE AVAILABLE FOR USE BY THE PUBLIC AT TIMES WHEN MASS EXCAVATION ACTIVITIES ARE NOT OCCURRING. CLOSURE OF PEDESTRIAN ACCESS GATES REQUIRES APPROVAL FROM THE OWNER AND SHALL BE COMMUNICATED IN WRITING WITH 48 HOURS NOTICE.
- 4. EXISTING FENCING AND ALL GATES SHALL REMAIN AFTER COMPLETION OF THE PROJECT.
- 5. CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE TREE PROTECTION FENCING AS SHOWN ON THE PLANS. TREE PROTECTION FENCING AREAS FOR CLUSTERS OF TREES AND TREE PROTECTION FOR INDIVIDUAL TREES TO REMAIN AFTER COMPLETION OF THE PROJECT.

EXISTING CONDITIONS TO BE SURVEYED IN JANUARY 2020

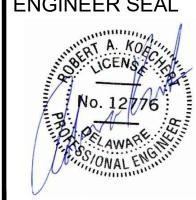


PREPARED BY:

OF
MARVA

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APPROVALS	DATE	CITY OF NEWARK				
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CHECKED BY: RAK	12-27-19	CONTRACT NO. 19-14				
NGINEER: CRB	12-27-19	SHEET TITLE: EXISTING SITE CONTROLS				
PERATIONS:		SCALE: AS NOTED DWG NO.				
REVISION:		SHEET NO: 3 OF 8				



JMT SURVEY TRAVERSE CONTROL COORDINATE TABLE							
NORTHING	EASTING	ELEV.	DESCRIPTION				
613144.49	559638.87	144.65	TRAV				
612904.51	560173.96	134.43	TRAV				
612654.49	559969.92	131.75	TRAV				
612370.79	559668.87	132.06	TRAV, MAG.NAIL				
612509.70	559306.74	145.87	TRAV, R&C				
612684.07	559382.93	144.96	TRAV				
612968.20	559574.78	143.01	TRAV, R&C				
612917.98	559905.76	136.02	TRAV, R&C				
_	NORTHING 613144.49 612904.51 612654.49 612370.79 612509.70 612684.07 612968.20	NORTHING EASTING 613144.49 559638.87 612904.51 560173.96 612654.49 559969.92 612370.79 559668.87 612509.70 559306.74 612684.07 559382.93 612968.20 559574.78	NORTHING EASTING ELEV. 613144.49 559638.87 144.65 612904.51 560173.96 134.43 612654.49 559969.92 131.75 612370.79 559668.87 132.06 612509.70 559306.74 145.87 612684.07 559382.93 144.96 612968.20 559574.78 143.01				

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POINT NO.	STATION	NORTHING	EASTING				
1	0+00.00	612853.83	559753.57				
2	0+85.27	612841.13	559833.32				
3	0+98.96	612832.03	559843.55				
4	1+03.23	612829.56	559847.02				
5	1+13.25	612824.64	559855.75				
6	2+70.77	612688.20	559887.49				
7	2+85.37	612675.49	559880.34				
8	3+79.37	612610.93	559814.94				
9	4+54.33	612568.35	559753.84				
10	5+39.28	612496.22	559710.39				
11	6+60.80	612422.96	559621.47				
12	7+41.29	612437.75	559543.69				
13	8+70.60	612525.00	559450.04				
14	10+31.08	612669.43	559473.80				
15	11+16.62	612722.85	559540.62				
16	11+27.35	612730.72	559547.85				
17	11+62.60	612757.49	559570.20				
18	13+33.96	612842.32	559719.08				

EXISTING CONDITIONS TO BE SURVEYED IN JANUARY 2020



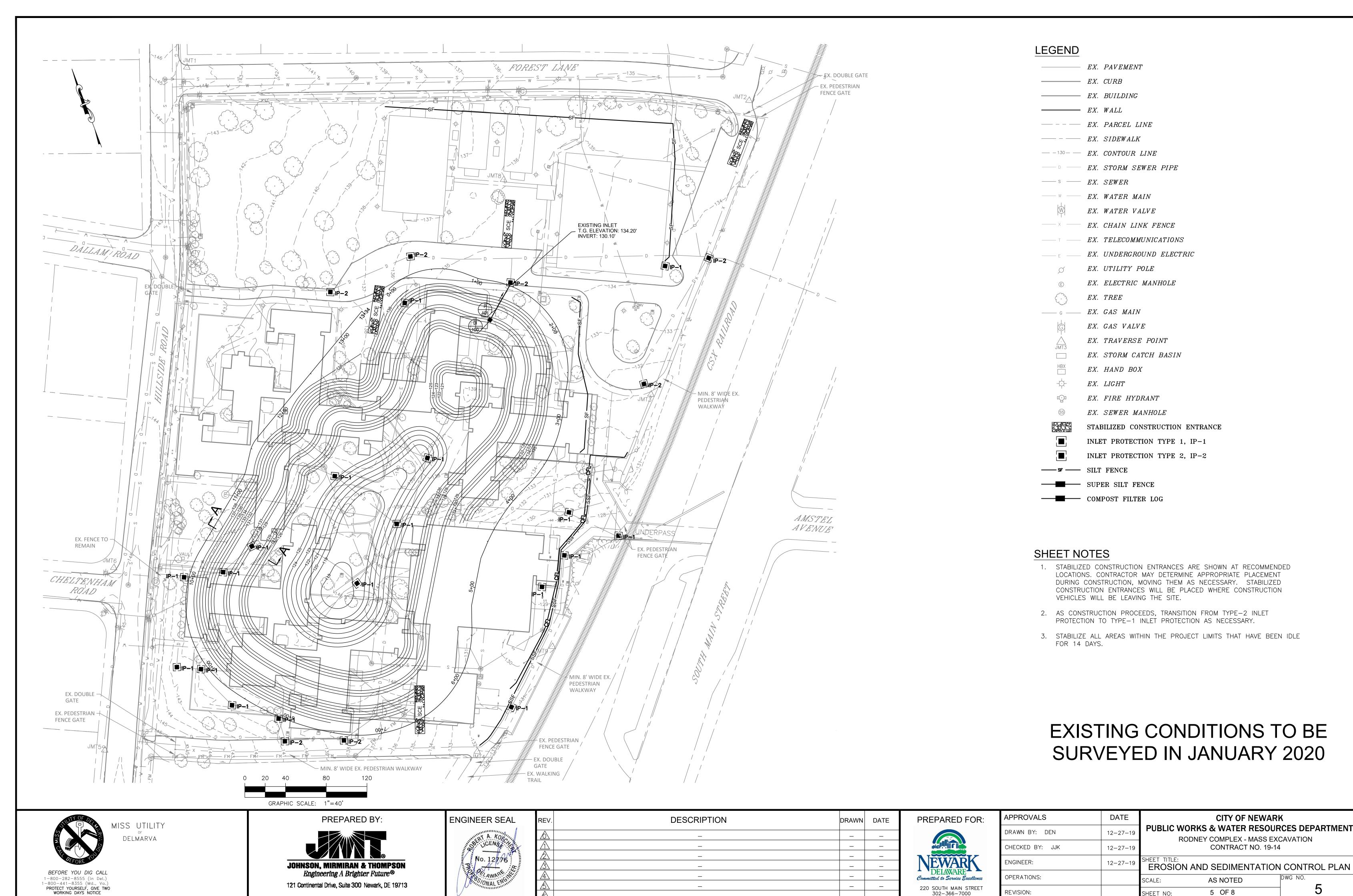
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PPROVALS	DATE	CITY OF NEWARK
RAWN BY: DEN	12-27-19	PUBLIC WORKS & WATER RESOURCES DEPARTMENT RODNEY COMPLEX - MASS EXCAVATION
HECKED BY: JJK	12-27-19	CONTRACT NO. 19-14
IGINEER:	12-27-19	SHEET TITLE: MASS EXCAVATION PLAN
PERATIONS:		SCALE: AS NOTED DWG NO.
		SHEET NO. 4 OF 8



5 OF 8

SHEET NO:

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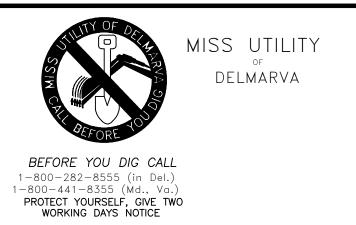
302-366-7000

SECTION A-A NOT TO SCALE

		TEMPORARY	OUTLET F	PIPE SCH	HEDULE	
	NO.	SIZE / TYPE	LENGTH	SLOPE	INT. EL.	DIS. EL.
[101	12" CMP (TEMPORARY)	41	0.0050	1 <i>30. 31</i>	130.10

TEMPORARY OUTLET STRUCTURE SCHEDULE					LE	
[NO.	STATION	OFFSET	INLET TYPE	T.G. EL.	INV. EL.
	100	1+22.95	40. 35 RT	24" CMP RISER W/ 54" CMP TRASH RACK	134.00	130.31

*SEE PIPE OUTLET SEDIMENT TRAP DETAIL, SHEET 8.



PREPARED BY: JOHNSON, MIRMIRAN & THOMPSON Engineering A Brighter Future® 121 Continental Drive, Suite 300 Newark, DE 19713

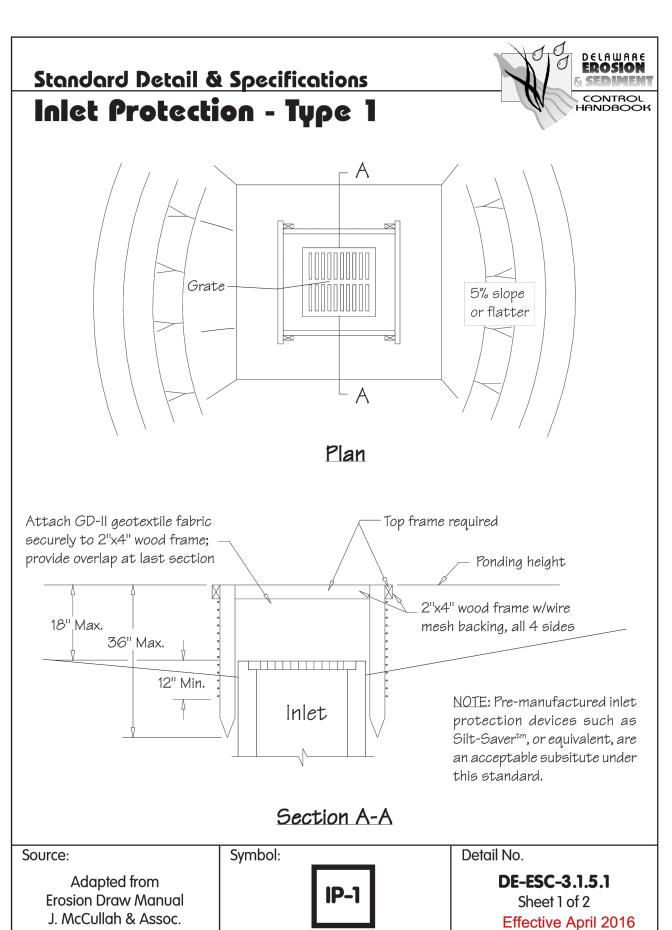


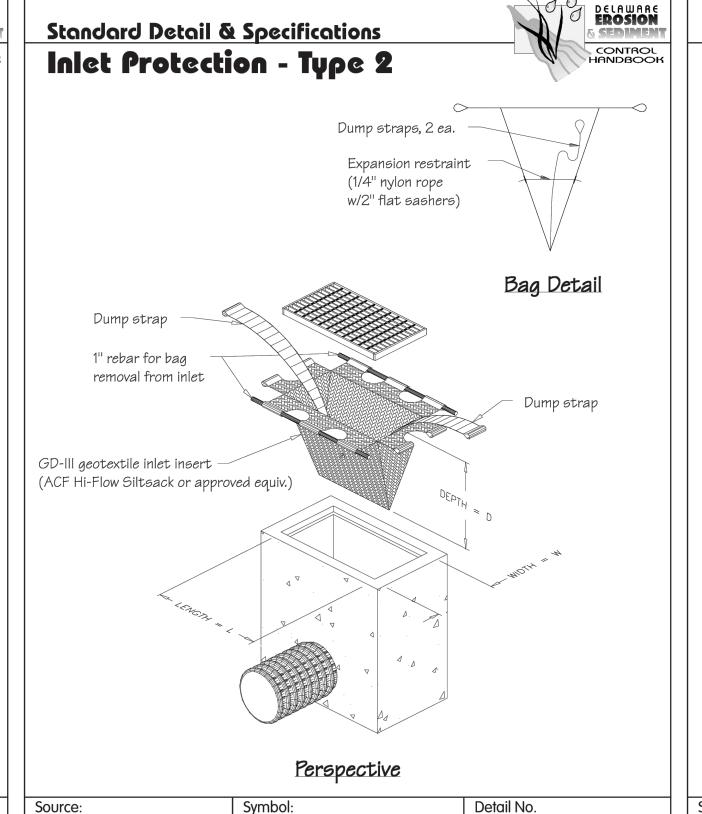
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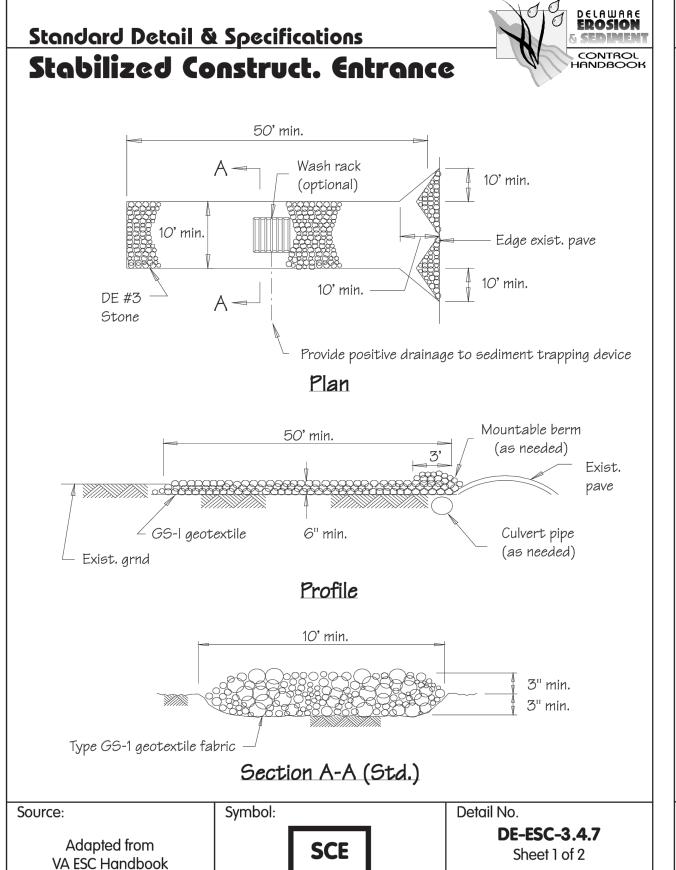
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NEWARK DELAWARE Committed to Service Excellence
220 SOUTH MAIN STREET 302-366-7000

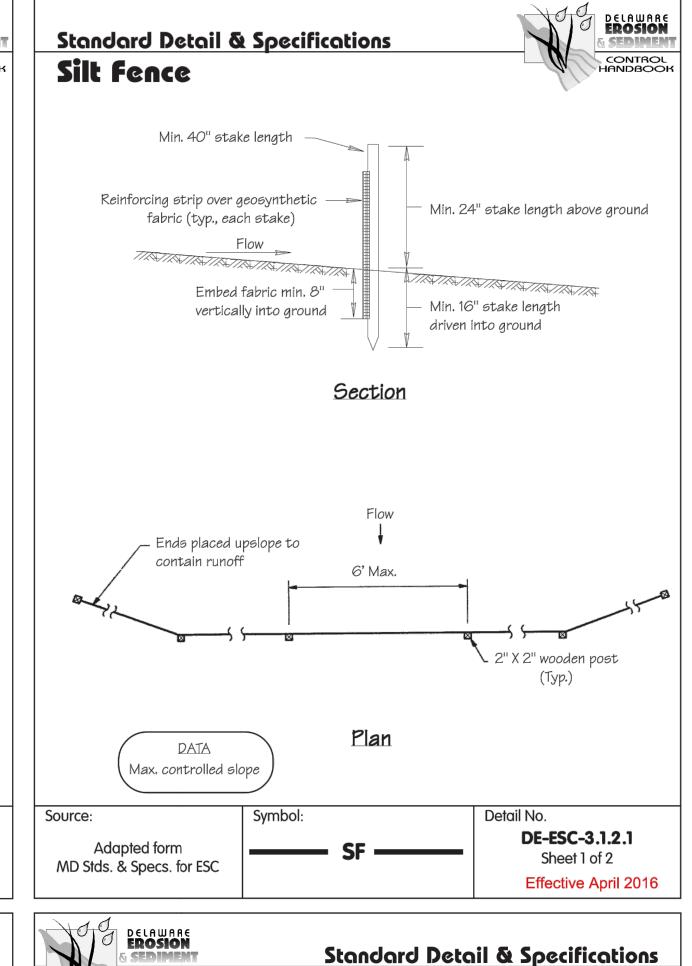
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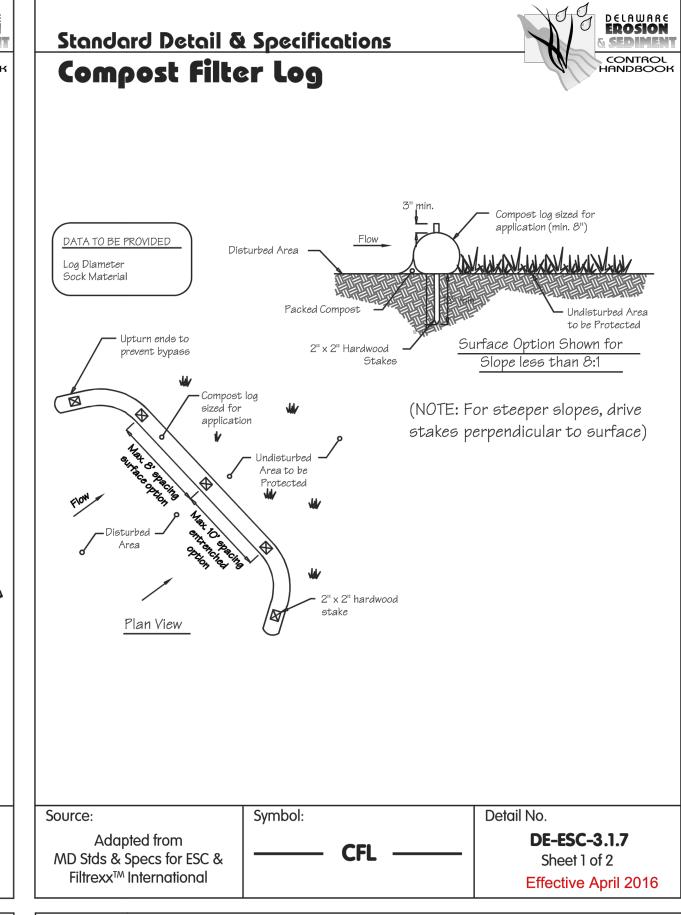
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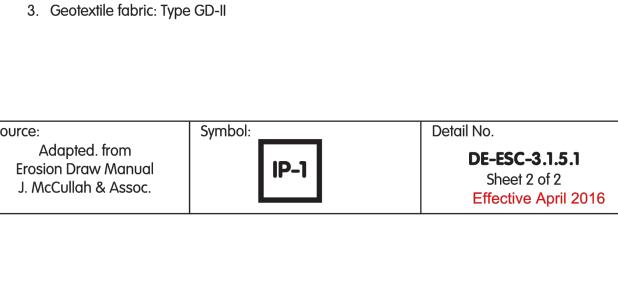


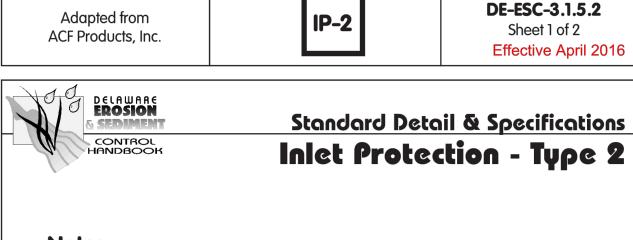
Construction Notes:

- 1. Excavate completely around inlet to a depth of 18" below grate elevation.
- 2. Drive 2" x 4" post 1' into ground at four corners of inlet. Place nail strips between posts on ends of inlet. Assemble top portion of 2"x 4" frame using overlap joint shown. Top of frame (weir) must be 6" below edge of roadway adjacent to inlet.
- 3. Stretch wire mesh tightly around frame and fasten securely. Ends must meet at post.
- 4. Stretch geotextile fabric tightly over wire mesh, the cloth must extend from top of frame to 18" below inlet grate elevation. Fasten securely to frame. Ends must meet at post, be overlapped and folded, then fastened down.
- 5. Backfill around inlet in compacted 6" layers until at least 12" of geotextile fabric is buried.
- 6. If the inlet is not in a low point, construct a compacted earth dike in the ditchline below it. The top of this dike is to be at least 6" higher than the top of frame (weir).
- 7. This structure must be inspected frequently and the filter fabric replaced when clogged.

Materials:

- 1. Wooden frame is to be constructed of 2" x 4" construction grade lumber.
- 2. Wire mesh must be of sufficient strength to support filter fabric with water fully impounded





Inlet Protection - Type 2

Sheet 1 of 2

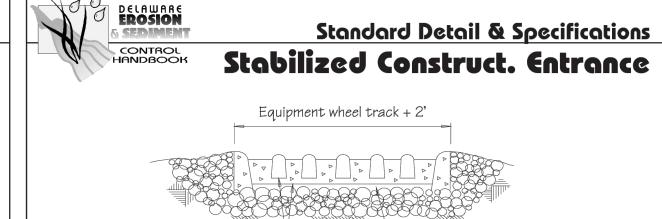
Notes:

- This practice shall only be used in situations in which Inlet Protection Type 1 cannot be used due to site constraints. These include, but are not limited to partially completed parking areas, streets, roads, etc.
- 2. It may be necessary to transition from Type 1 to Type 2 Inlet Protection as construction
- 3. For areas where there is a concern for oil run-off or spills, insert shall meet one of the above specifications with an oil-absorbant pillow or shall be made completely from an oilabsorbant material with a woven pillow.

Materials:

The geotextile inlet insert shall meet or exceed the specifications of Type GD-III geotextile in accordance with Appendix A-3 of the Delaware Erosion & Sediment Control Handbook.

Source: Detail No. **DE-ESC-3.1.5.2** Adapted from IP-2 ACF Products, Inc. Sheet 2 of 2 Effective April 2016



Effective April 2016

Provide space for drainage

Section A-A (Opt.)

Construction Notes:

Metal bars set in reinforced conc. –

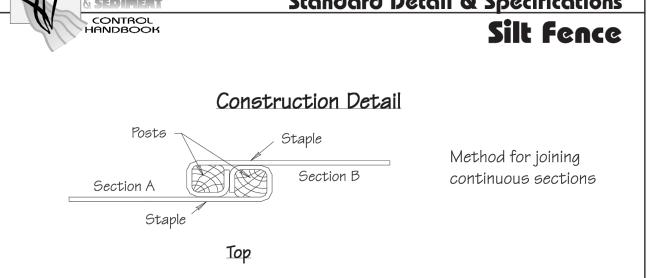
(traffic bearing grates, timber mats or other approved equiv. may be substituted)

- l. Stone size Use DE #3 stone.
- 2. Length As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum
- 3. Thickness Not less than size (6) inches.

an approved sediment trapping device.

- 4. Width Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
- 5. Geotextile Type GS-I; placed over the entire area prior to placing of stone.
- 6. <u>Surface Water</u> All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
- Maintenance The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
- Washing Vehicle wheels shall be cleaned to remove sediment prior to entrance onto public rights-ofway. When washing is required, it shall be done on an area stabilized with stone and which drains into
- 9. <u>Inspection</u> Periodic inspection and needed maintenance shall be provided after each rain.





Construction Notes:

- 1. Geosynthetic fabric to be fastened securely to fence posts with wire ties or staples.
- 2. When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
- 3. Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.

Materials:

- 1. Stakes: Steel (either T or U) or 2" x 2" hardwood
- 2. Geosynthetic Fabric: Type GD-I
- 3. Reinforcing strip: Wooden lath, plastic strip or other approved equivalent
- 4. <u>Prefabricated Unit:</u> Geofab, Envirofence, or approved equivalent

ource:	Symbol:	Detail No.
Adapted from WD Stds. & Specs. for ESC	SF	DE-ESC-3.1.2.1 Sheet 2 of 2 Effective April 2016

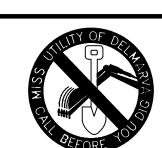


Construction Notes:

prevent runoff bypass.

- Prior to installation, clear bedding area of obstructions including rocks or debris larger than 1 inch and fill in any sharp depression areas.
- 2. Fill the sock fabric using a pneumatic blower so that the logs are rigid and do not deform. Terminate
- 3. For trenched applications, excavate 2 to 4 inches below grade along the width and length of the compost filter log.
- 4. Install the compost filter logs perpendicular to the flow direction and parallel to the slope with the beginning and end of the installation pointing up the slope a minimum of 1 foot elevation difference. On sites where this is not possible, upturn at a minimum length of 10' at a 30 degree angle to
- 5. For untrenched applications, blow or hand pack soil, mulch, or compost on the upslope side of the log, filling the bottom void area.
- 6. Stake the filled log every 10 feet maximum through the center of the sock for trenched applications, or every 8 feet for untrenched. The stake shall be a 2" by 2" hardwood. It should extend 12" below grade and protrude at least 3" above the top of the sock. If located on a slope greater than 8:1, the stake shall be angled downslope at a 45 degree angle to prevent the force of the water from dislodging to log.
- When the length of the compost filter log needed exceeds the available compost filter sock length, the next sock shall be overlapped a minimum of 12" before being filled, and a stake placed through both socks at the overlap.
- 8. Remove accumulated sediment when it has reached half of the effective height of the log.
- 9. Inspect weekly and after rain event. If sock is degrading or the sock is failing, vegetate to secure the compost, replace the log, or reinforce with an additional log. If the log has been crushed due to construction equipment, it can be "fluffed" back to its effective height. If the effective height can no longer be restored, the log shall be replaced or reinforced with an additional compost filter log.

Source:	Symbol:	Detail No.	
Adapted from MD Stds & Specs for ESC & Filtrexx™ International	—— CFL ——	DE-ESC-3.1.7 Sheet 2 of 2 Effective April 2016	



1-800-282-8555 (in Del.)

PROTECT YOURSELF, GIVE TWO WORKING DAYS NOTICE

MISS UTILITY DELMARVA



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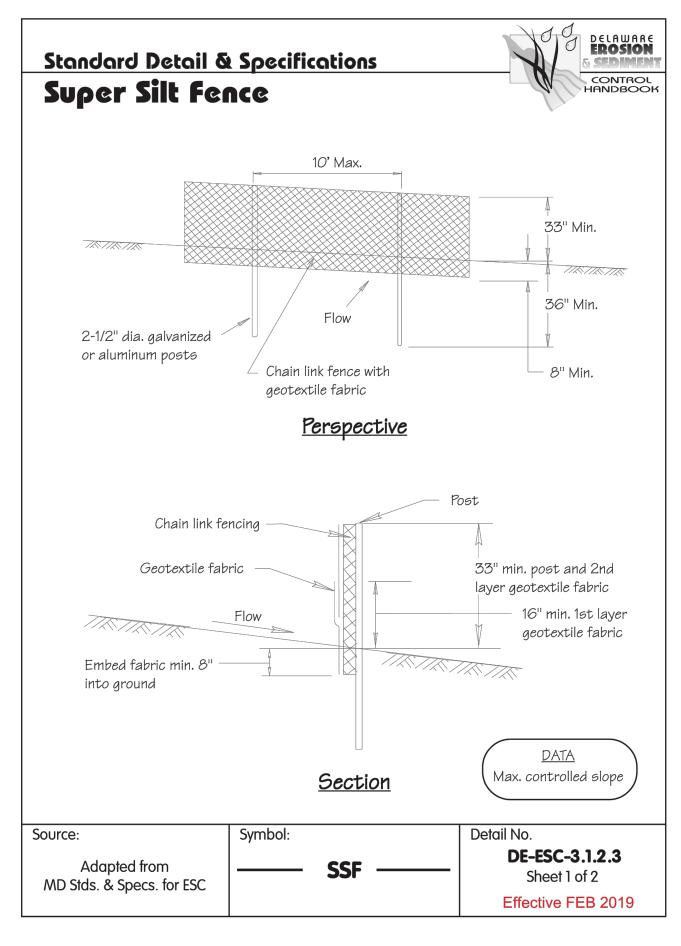


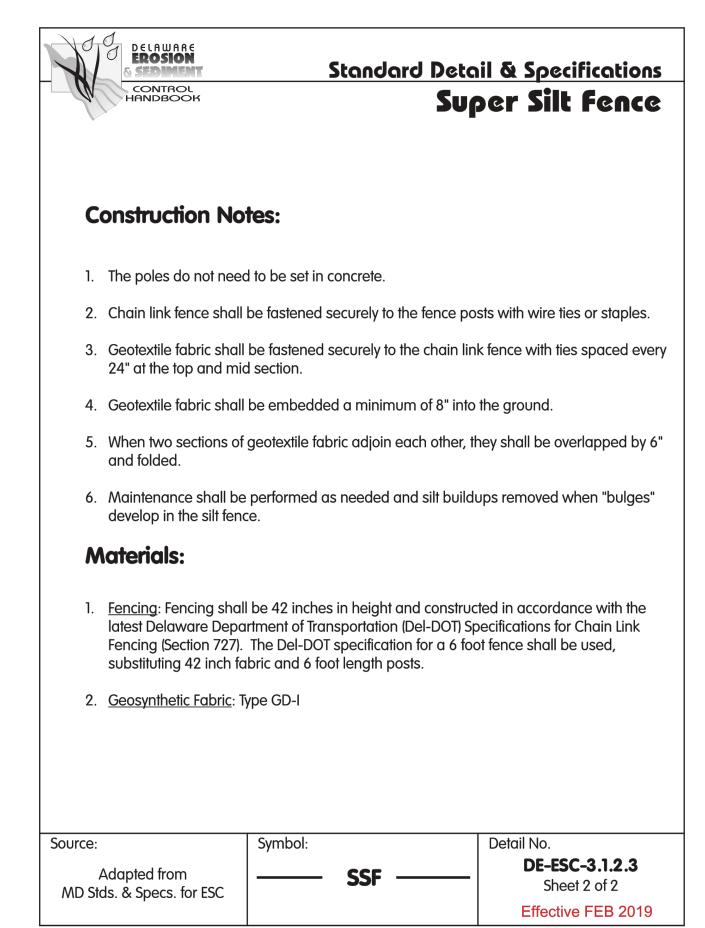
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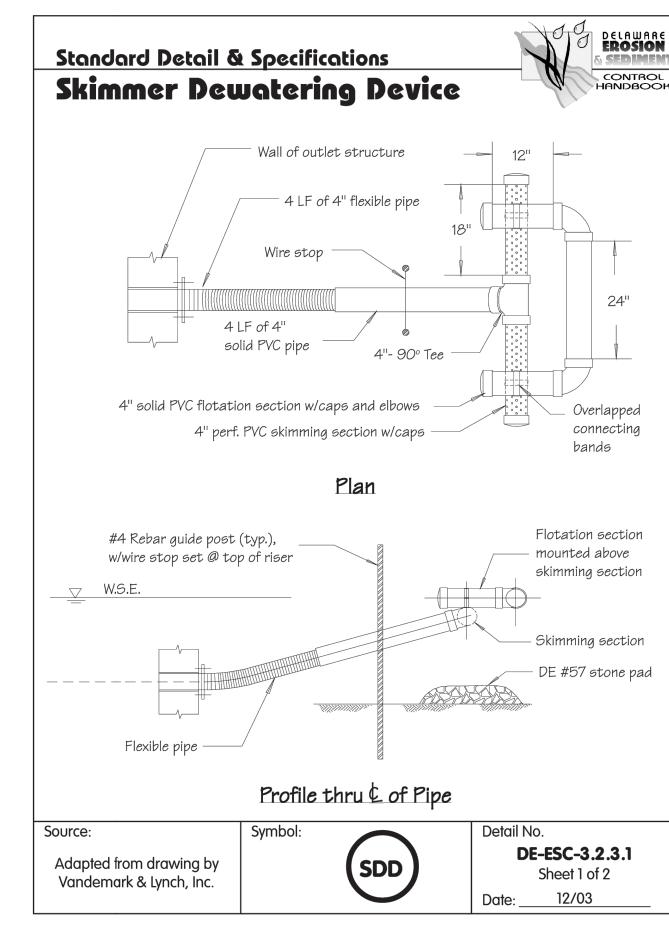


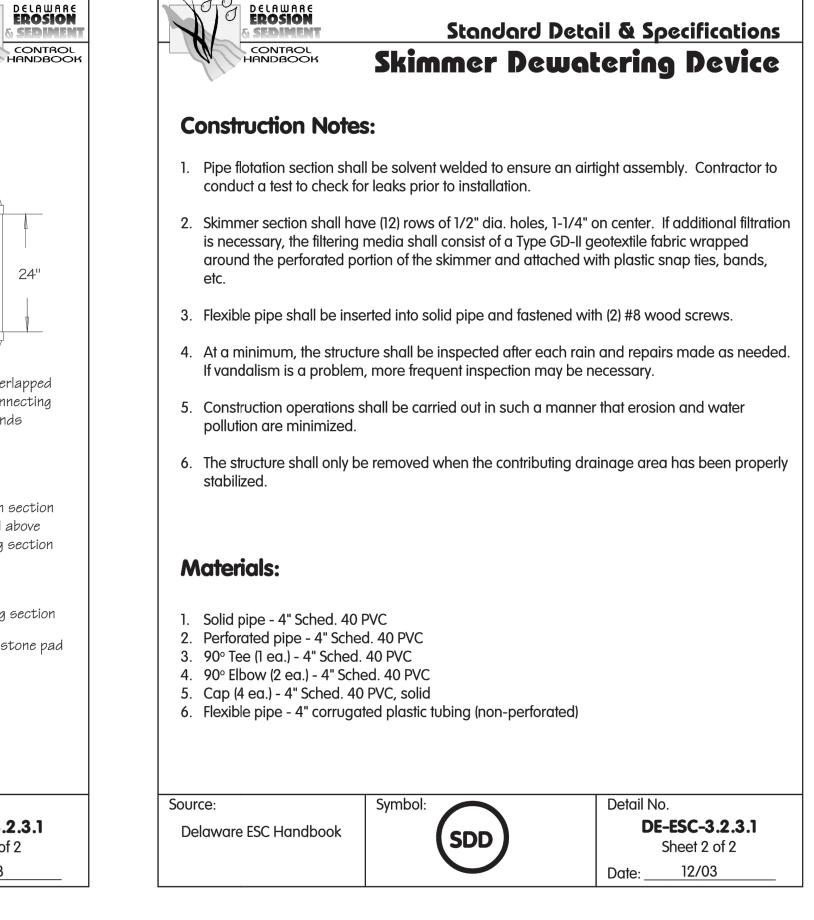
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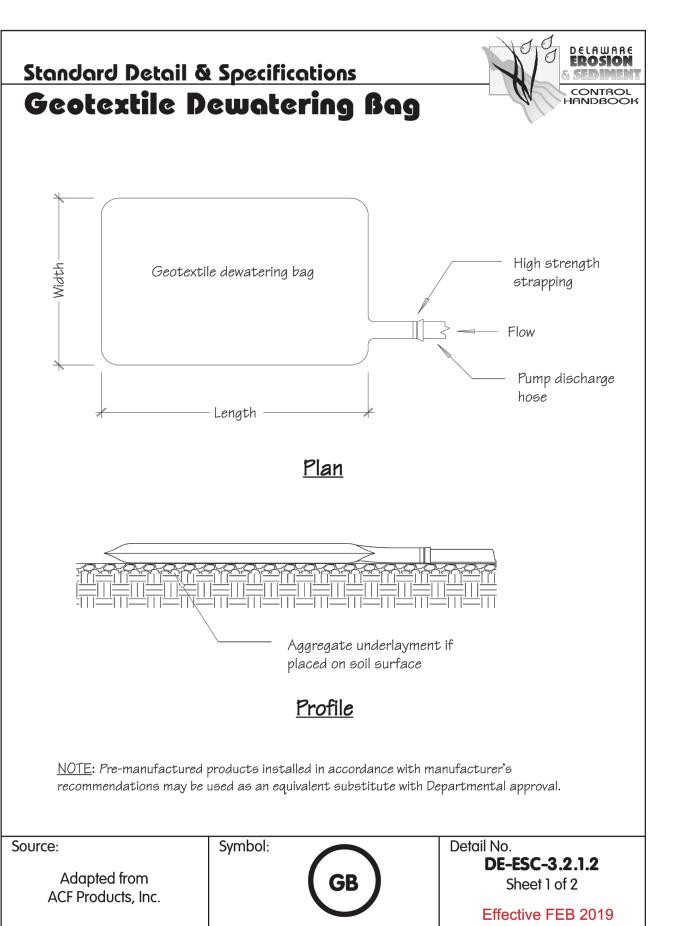
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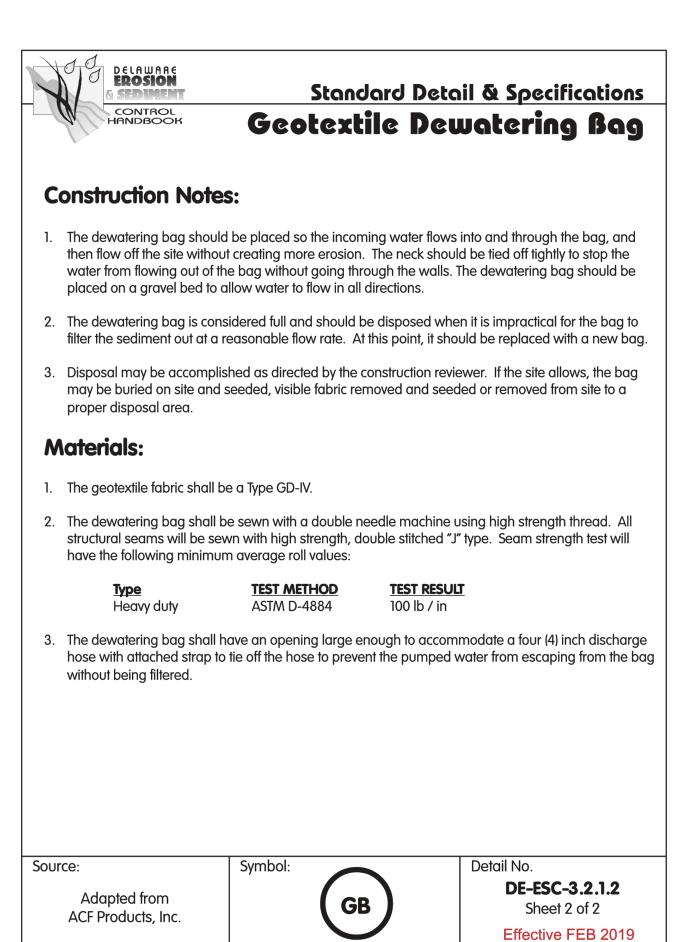


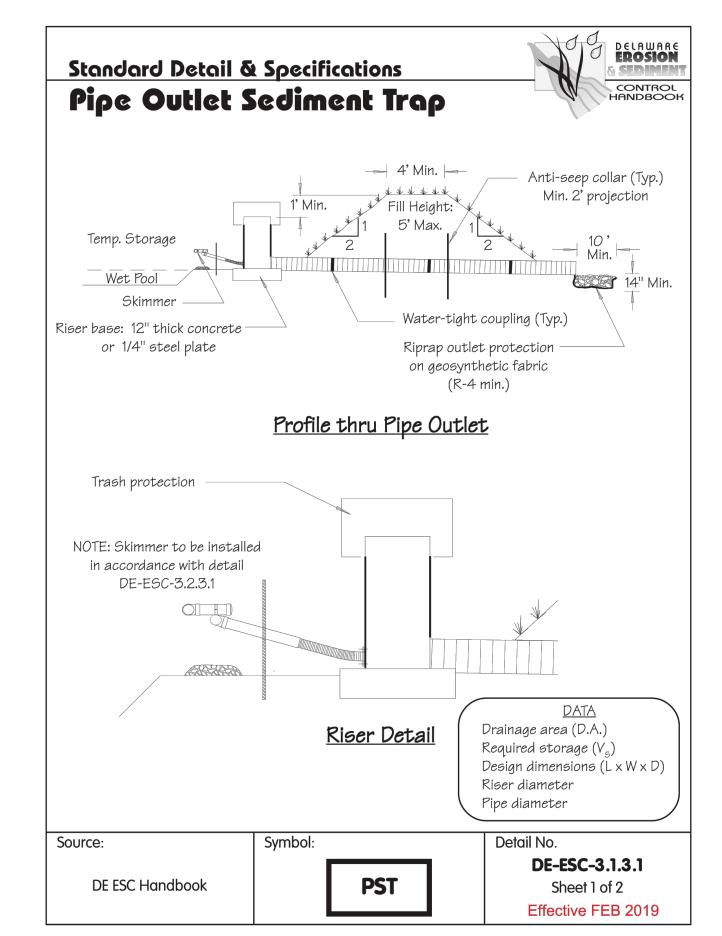


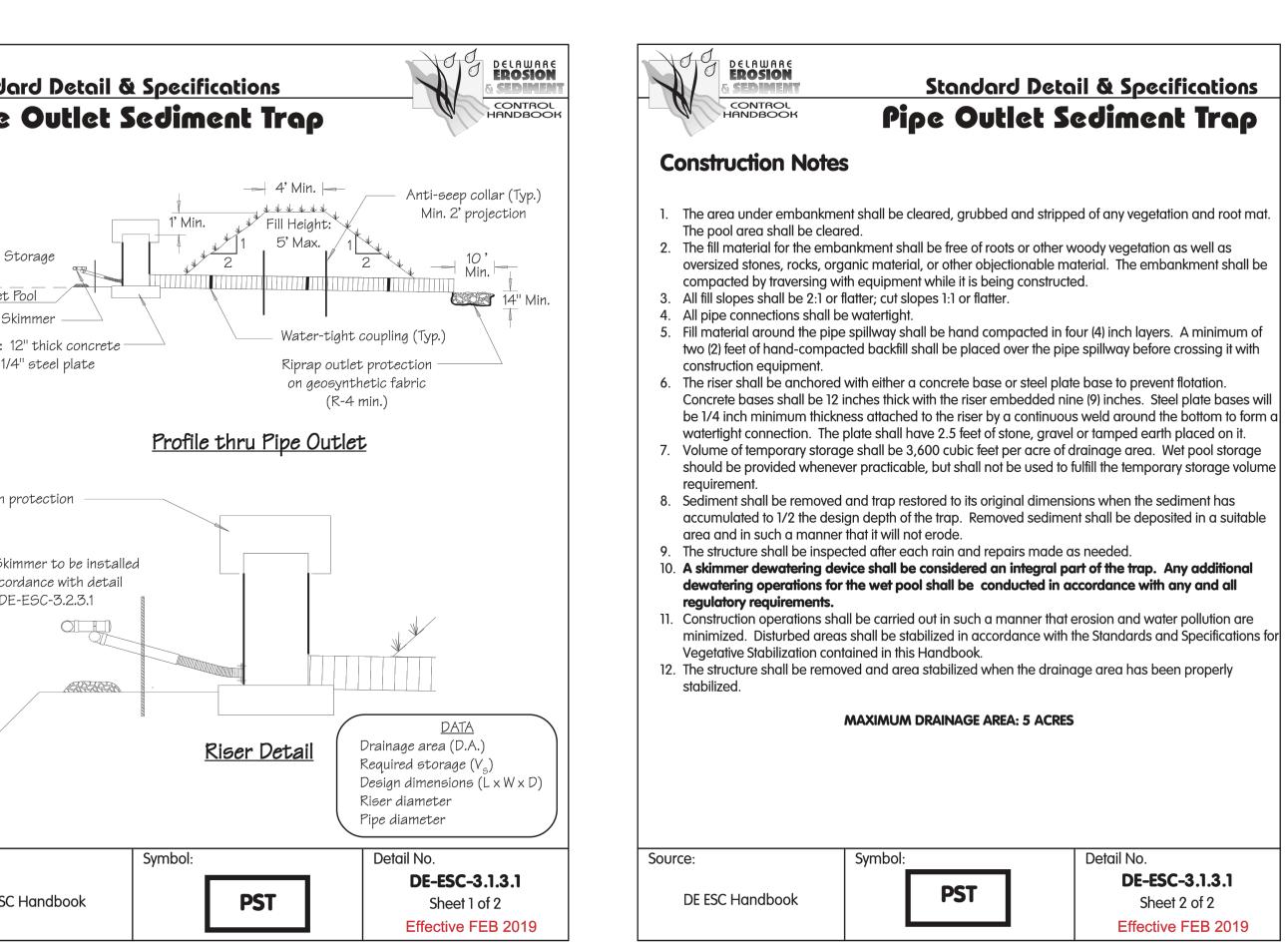














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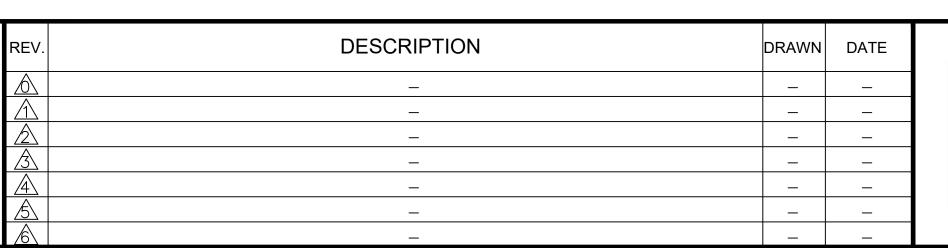
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